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**Amendment and Response**

Applicant: Rory A. Heim et al.

Serial No.: 09/851,765

Filed: May 9, 2001

Docket No.: 10006454-1

Title: METHOD AND APPARATUS FOR COMPENSATING FOR INK CONTAINER EXTRACTION CHARACTERISTICS

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**REMARKS**

This Amendment is responsive to the Non-Final Office Action mailed August 26, 2003, in which claims 1, 4-12 and 15 were rejected and claims 2, 3, 13, 14 and 16-21 were objected to. With this Amendment, claims 9, 16, 20 and 21 are amended and claims 22-36 are being added. Claims 1-36 are now pending in the application and are presented for consideration and allowance.

**Claim Rejections under 35 U.S.C. § 112**

Claims 9-21 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, in claims 9 and 16, the Examiner questions whether the ink delivered to the printhead is different from the ink extraction from the ink delivery system. The remaining claims are rejected under 35 U.S.C. §112, second paragraph, for being dependent upon a rejected base claim.

Independent claims 9 and 16 have been amended to eliminate any confusion between the ink delivered to the printhead and the ink extraction from the ink delivery system. In particular, claim 9 has been amended to make clear that ink is extracted from the ink delivery system and delivered to the printhead. Claim 16 has been amended to make clear that the method for operating a printing system comprises adjusting a rate of ink flow into the printhead.

Dependent claims 20 and 21 have been amended to conform to the language of amended independent claim 16.

In light of these amendments, Applicants believe that the rejection of claims 9-21 under 35 U.S.C. §112, second paragraph, has been overcome and should be withdrawn. Such action is respectfully requested.

**Claim Rejections under 35 U.S.C. § 102**

Claims 1, 4-12 and 15 stand rejected under 35 U.S.C. §102(b) as being anticipated by Childers et al. (U.S. Patent No. 6,305,795). Applicants respectfully submit that the

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Examiner is referring to U.S. Patent No. 5,956,057, also to Gast et al., which is the parent case to U.S. Patent No. 6,305,795.

Independent claim 1 is directed to an inkjet printing system configured for receiving a replaceable ink container having ink extraction characteristics. The inkjet printing system comprises an ink extraction control device for determining ink extracted from the replaceable ink container, and for selecting an ink usage rate print mode from a plurality of different ink usage rate print modes based on ink extraction characteristics of the replaceable ink container. An inkjet printing system including an ink extraction control device that both determines ink extracted and selects an ink usage rate print mode based on ink extraction characteristics is not taught, disclosed or anticipated by Childers et al.

The Applicants respectfully disagree with the Examiner's characterization of Childers et al. as applied to the claims of the present application, and submit that Childers et al. does not show, teach or anticipate the invention as claimed in independent claim 1.

First, the Examiner states that Childers et al. discloses an ink extraction control device (18) for determining ink extracted from the replaceable ink container (referencing Column 9, Lines 32-33) and for selecting an ink usage rate print mode (referencing Column 4, Lines 43-48) based on ink extraction characteristics of the replaceable ink container (referencing Column 9, Lines 29-31). However, Childers et al. actually discloses only determining ink volume remaining in the ink container. At Column 9, Lines 26-31, Childers et al. discloses that when changing from a first ink type to a non-identical second ink type, the volume of drops ejected from the printhead will be affected. The printing system of Childers et al. does not, however, disclose **selecting an ink usage rate print mode from a plurality of different ink usage rate print modes based on ink extraction characteristics of the replaceable ink container**, as claimed in independent claim 1. Rather, the printing system of Childers et al. determines (not selects) a change in ink usage rates when changing to a different ink, and compensates its ink volume calculations accordingly.

Second, with respect to independent claim 1, the Examiner states that Childers et al. discloses the replaceable ink container has ink extraction characteristics that vary with

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the ink level within the replaceable ink container (referencing Column 9, Lines 28-29). However, the referenced portion of Childers et al. actually discloses that a change in the ink from a first ink type to a non-identical second ink type will tend to affect the rate of ink usage (column 9, lines 26-29). That is not the same as the replaceable ink container 22 having ink extraction characteristics that vary with ink extraction, with the same ink type in the same ink container, as claimed in independent claim 1.

For at least the reasons set forth above, Childers et al. does not disclose, teach, or anticipate, either implicitly or explicitly, each and every one of the elements in independent claim 1. Therefore, Applicants' believe that the rejection of independent claim 1 under 35 U.S.C. § 102(e) has been overcome and should be withdrawn. Such action is respectfully requested.

Independent claim 9 has been amended and is directed to an inkjet printing system having a printhead responsive to control signals for depositing ink on media and an ink delivery system for delivering ink to the printhead. The inkjet printing system comprises a monitoring and control device for monitoring ink extracted from the ink delivery system and delivered to the printhead, and for adjusting rate of ink extraction from the ink delivery system during a print operation based on ink deposited on media and ink delivered to the printhead.

Childers et al. does not disclose, teach or anticipate the invention as claimed in independent claim 9. Specifically, **Childers et al. does not disclose a monitor and control device that adjusts the rate of ink extraction from the ink delivery system during a print operation based on ink deposited on media and ink delivered to the printhead.** As discussed above with regard to independent claim 1, Childers et al. teaches that when changing from a first ink type to a non-identical second ink type, the volume of drops ejected from the printhead will be affected. Thus, when determining the amount of ink remaining in the container, the printing system should compensate for the change in drop volume by changing the correlation of ink usage versus number of drops ejected from the printhead. The printing system of Childers et al. does not, however, adjust the rate of ink extraction from the ink delivery system during a print operation based on ink deposited on media and ink delivered to the printhead.

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For at least this reason, Childers et al. does not disclose, teach, or anticipate, either implicitly or explicitly, what is claimed by Applicants in independent claim 9. Therefore, Applicants' believe that the rejection of independent claim 9 under 35 U.S.C. § 102(e) has been overcome and should be withdrawn. Such action is respectfully requested.

Dependent claims 4-8, 10-12 and 15 are directly or indirectly dependent upon independent claim 1 and 9. As discussed above, it is believed that independent claims 1, and 9 are now in condition for allowance. Therefore, reconsideration and allowance of dependent claims 4-8, 10-12 and 15 is also requested.

**Allowable Subject Matter**

The Examiner objected to claims 2, 3, 13, and 14 as being dependent upon a rejected base claim, but indicated the claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants point out that claim 3 is already in independent form, having been previously rewritten in independent form in the Amendment and Response mailed July 19, 2002.

For the reasons discussed above, Applicants believe independent claims 1 and 9 are in allowable condition. Accordingly, dependent claims 2, 13 and 14 are also believed to be in allowable condition. Notice to that effect is respectfully requested.

The Examiner states that Claims 16-21 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. § 112, second paragraph, set forth in the Office Action. Claims 16, 20 and 21 have been amended as described above to overcome the § 112, second paragraph rejections, and allowance of claims 16-21 is respectfully requested.

**New Claims**

New claims 22-36 are submitted as being allowable over Childers et al. and therefore allowance of these claims is respectfully requested.

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**CONCLUSION**

In light of the above, Applicants' believe independent claims 1, 3, 9 and 16, and the claims depending therefrom, are in condition for allowance. Allowance of claims 1-36 is respectfully requested.

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Respectfully submitted,

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**CERTIFICATE UNDER 37 C.F.R. 1.8:** The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop Non-Fee Amendments, Commissioner for Patents, PO Box 1450, Alexandria, VA 23113-1450 on this 25<sup>th</sup> day of November, 2003.

By   
Name: Matthew B. McNutt